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**Chen**

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(54) **SHOE HAVING A LID FOR COVERING A DRAIN HOLE**

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(52) **U.S. Cl.** ..... **36/3 R**; 36/3 B; 36/3 A
(58) **Field of Search** ..... 36/3 B, 3 R, 3 A

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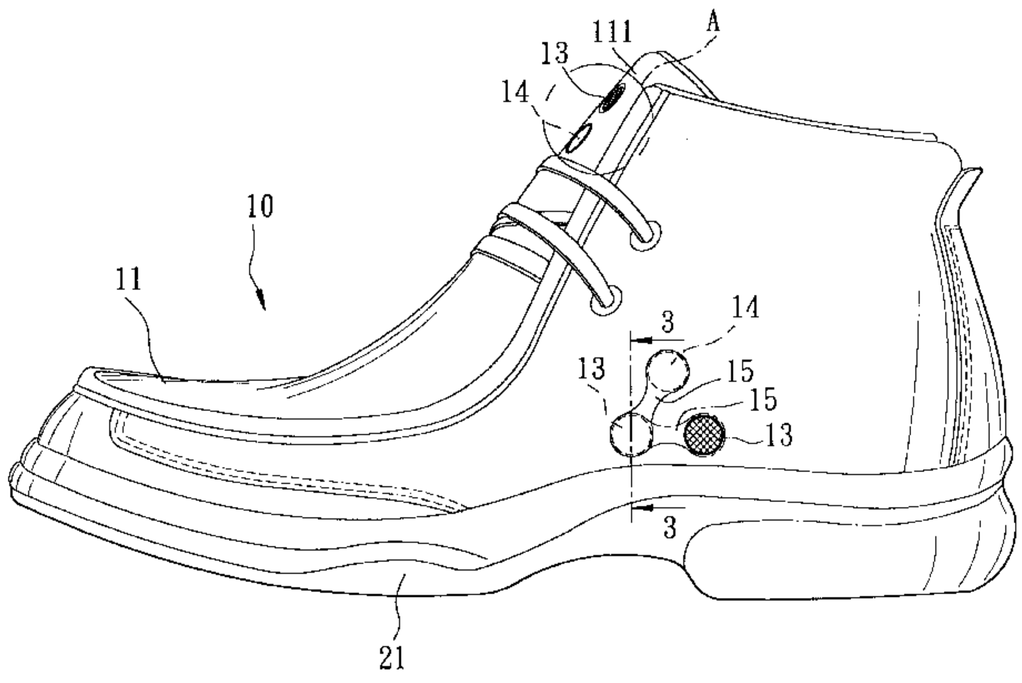
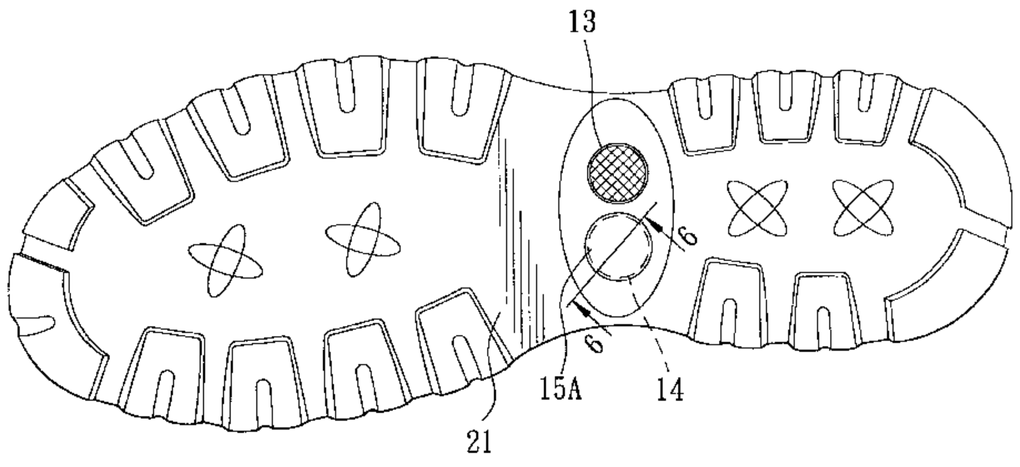
(57) **ABSTRACT**

A shoe includes a hollow base fixed in a through-hole formed in the shoe. The hollow base provides a fluid passage for ventilation or drainage. A lid is attached removably to the hollow base to block the fluid passage. In an embodiment, a solid stud is mounted on the shoe adjacent to the hollow base to retain the lid when the lid is removed from the hollow base. The lid may be elongated and has two closure parts attachable removably and respectively to the hollow base and the stud in a bridging manner. Preferably, the lid is capable of being press-fitted to the hollow base and/or the solid stud. The lid not only functions to close the hollow base but also serves to hold a logo.

**5 Claims, 15 Drawing Sheets**



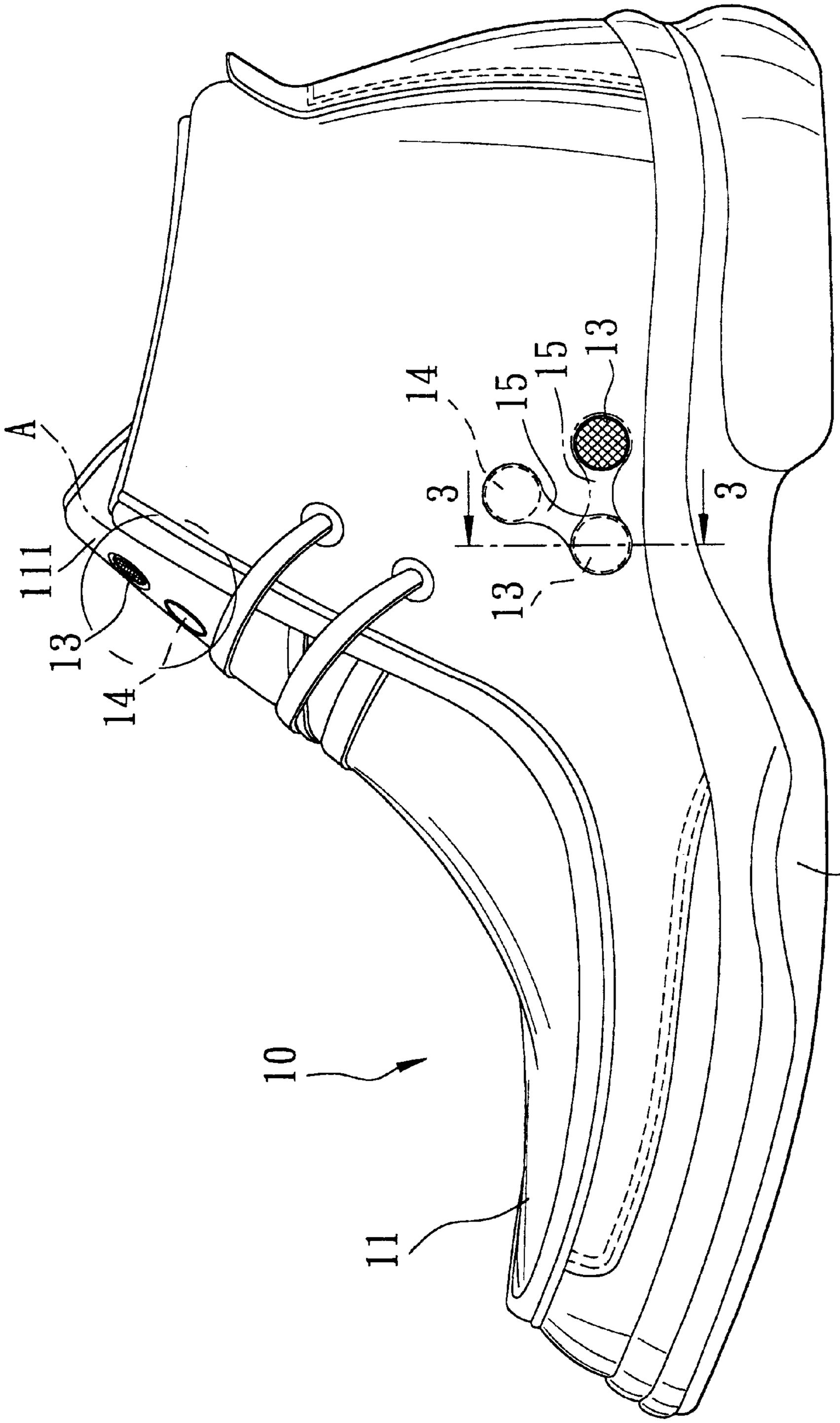



FIG. 1

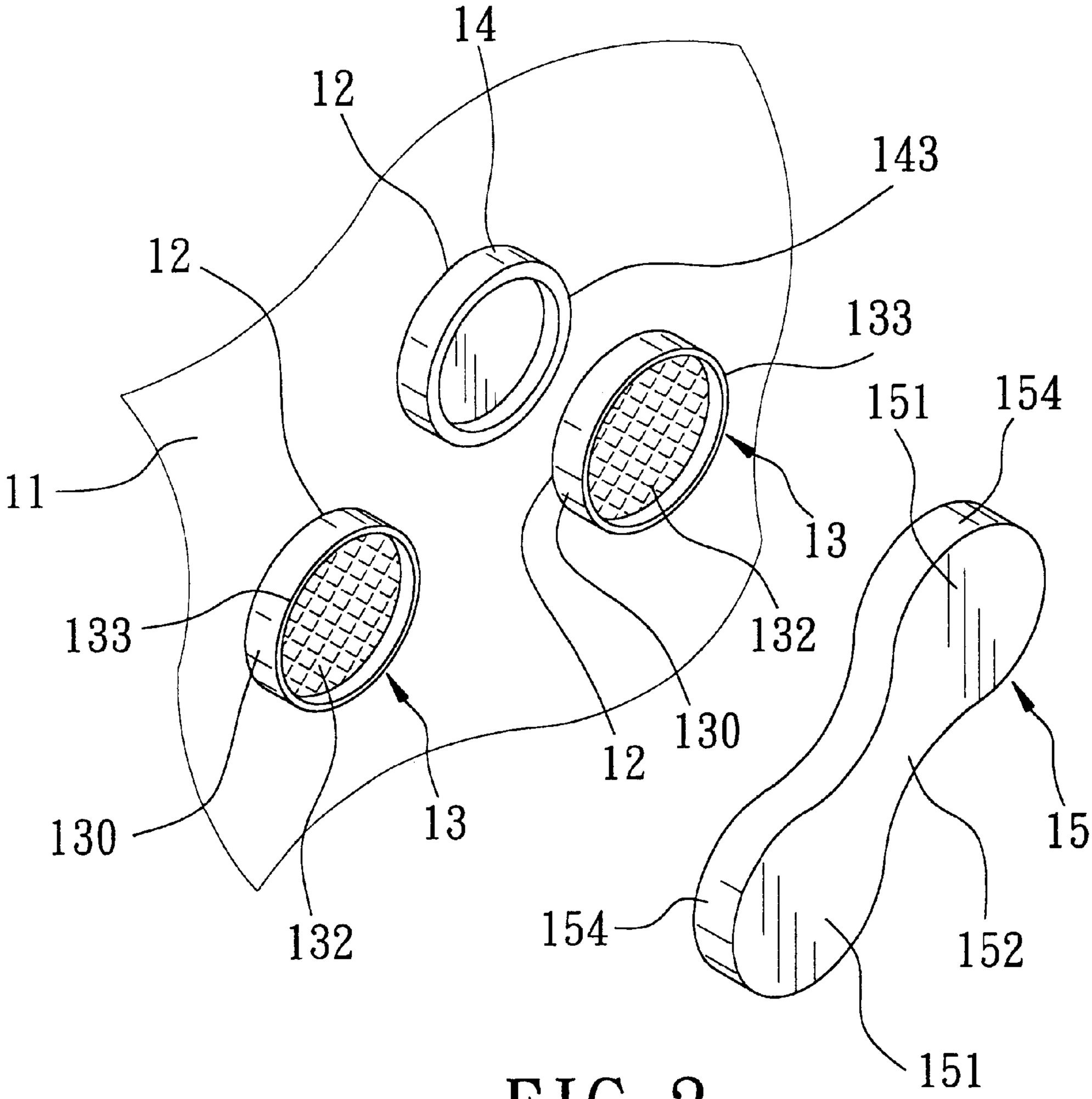

14
12
143
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FIG. 2

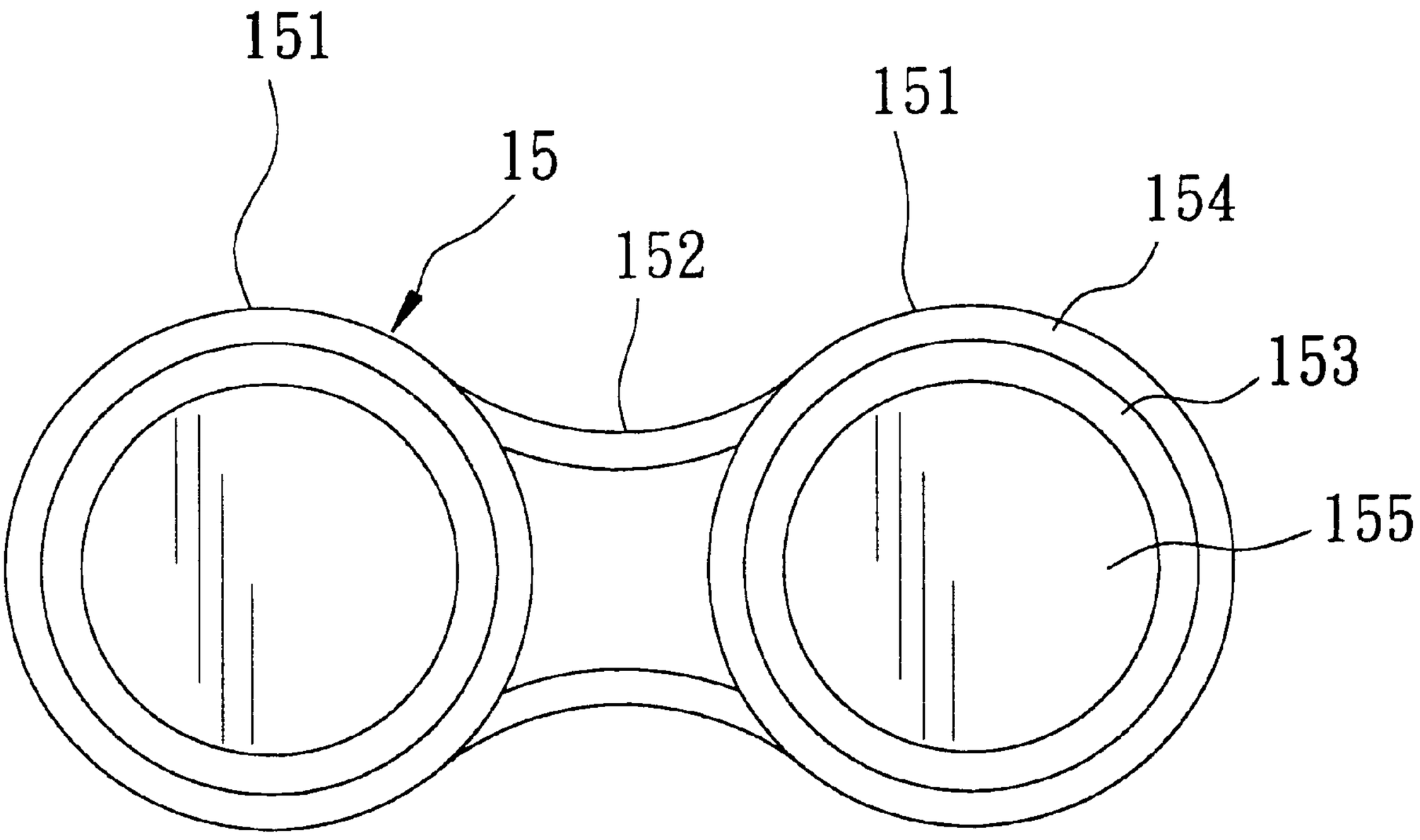


FIG. 2A

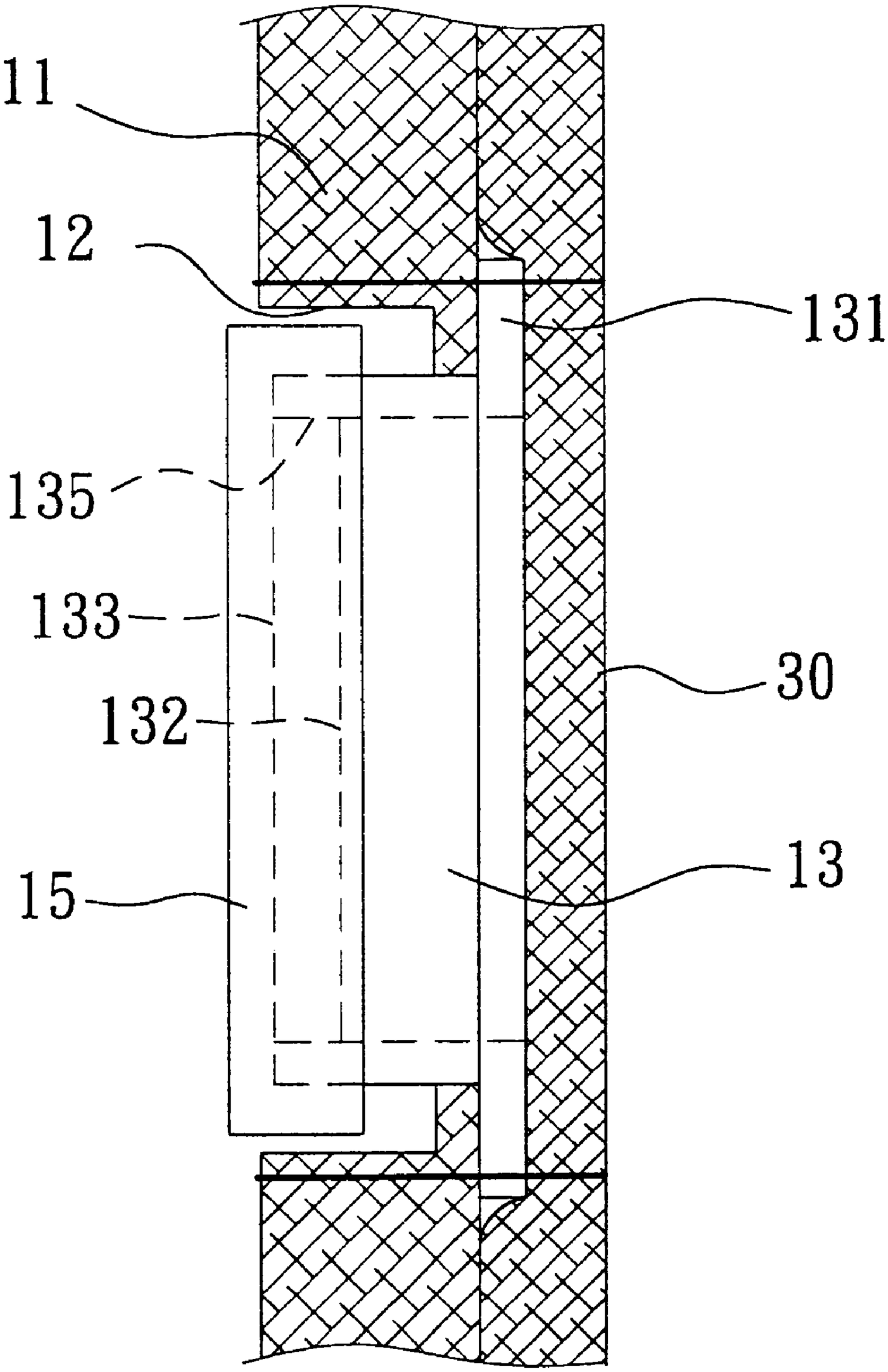


FIG. 3

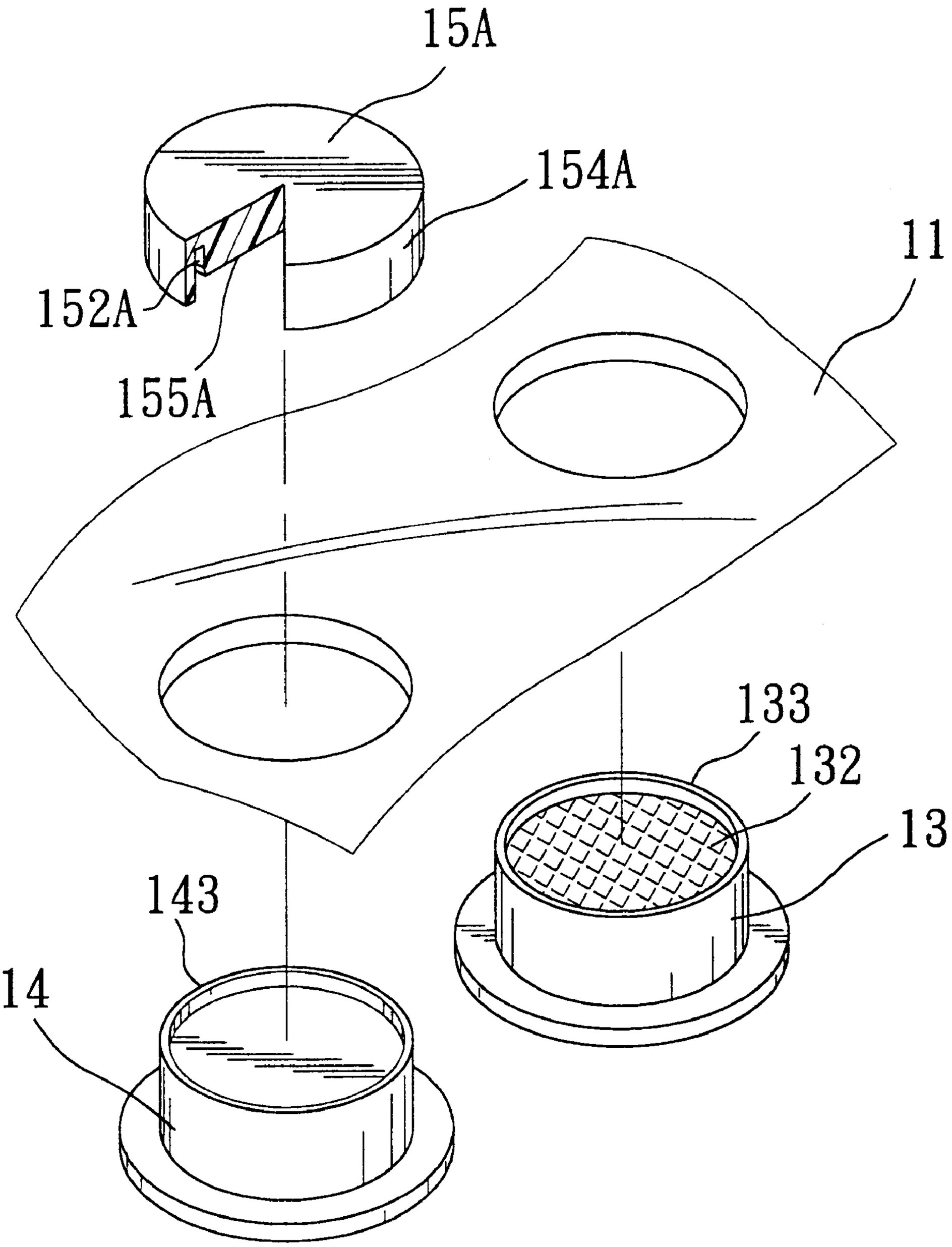


FIG. 4

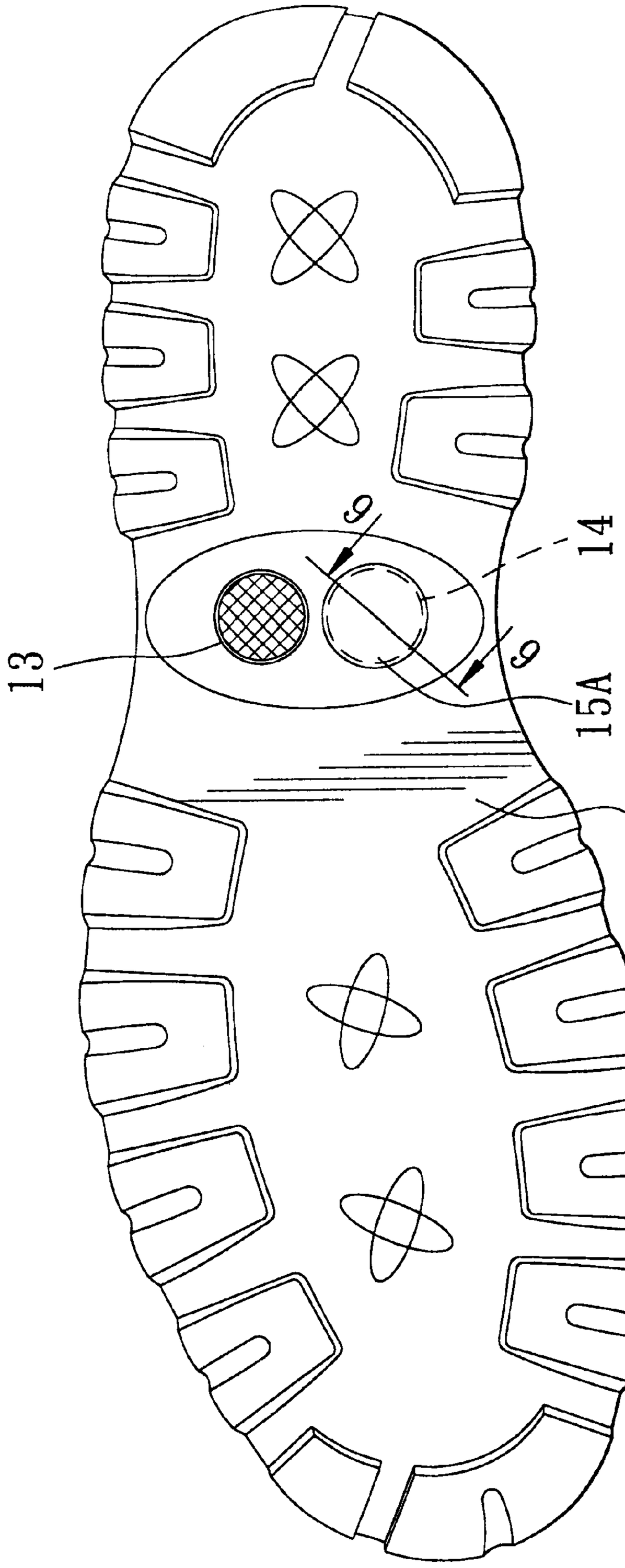


FIG. 5

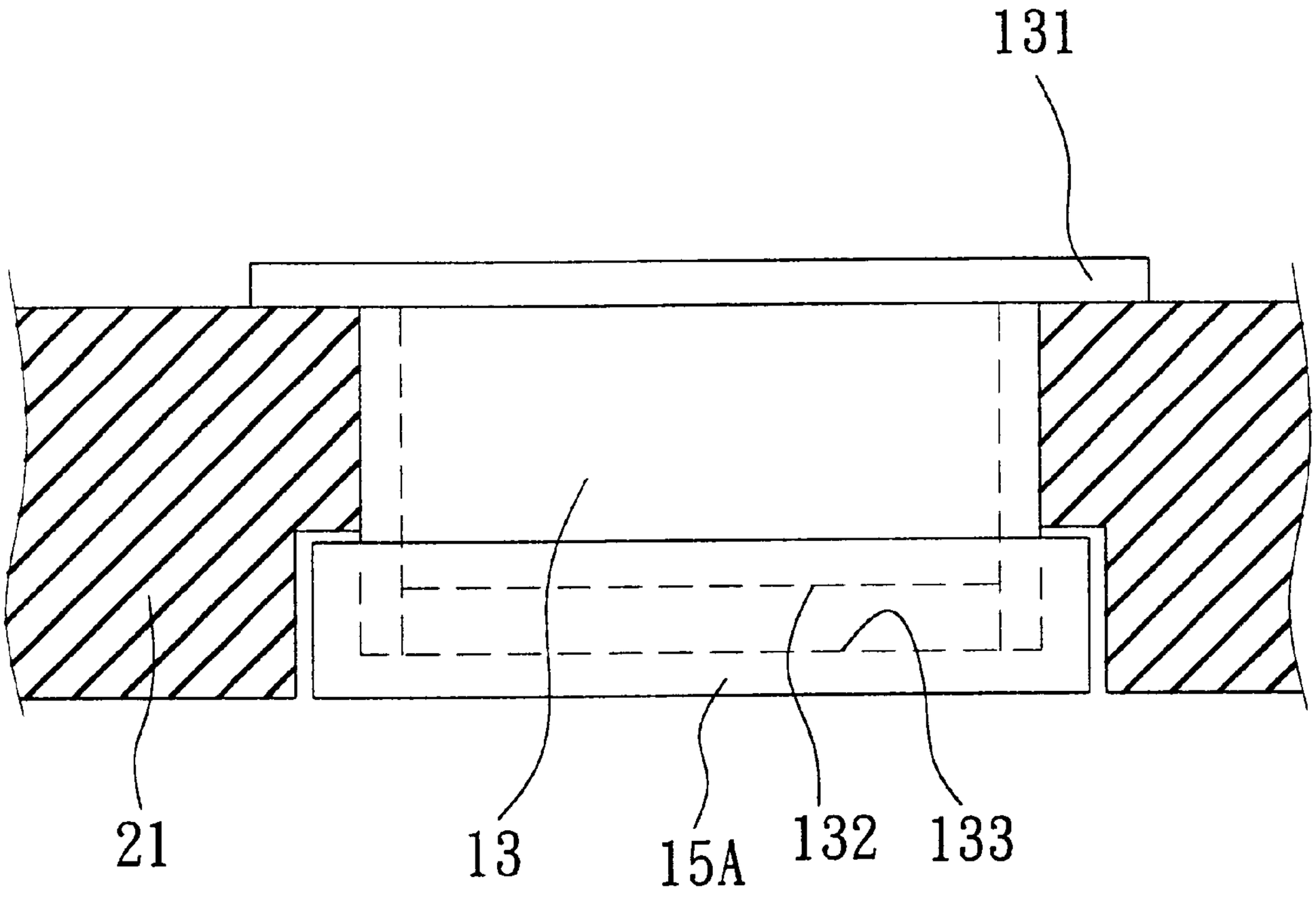


FIG. 6

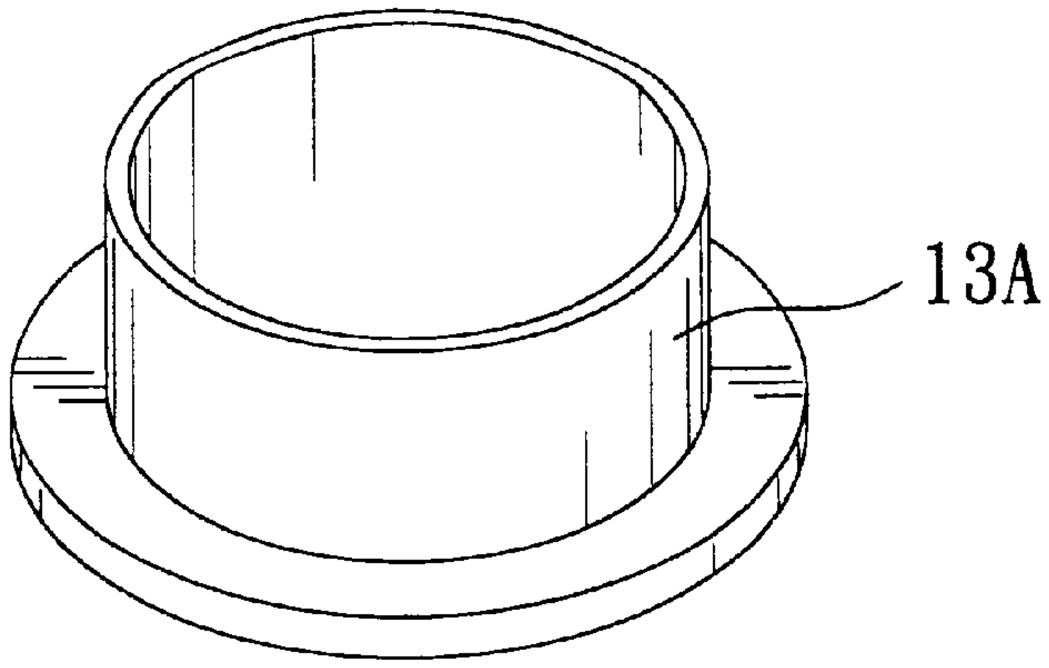


FIG. 7A

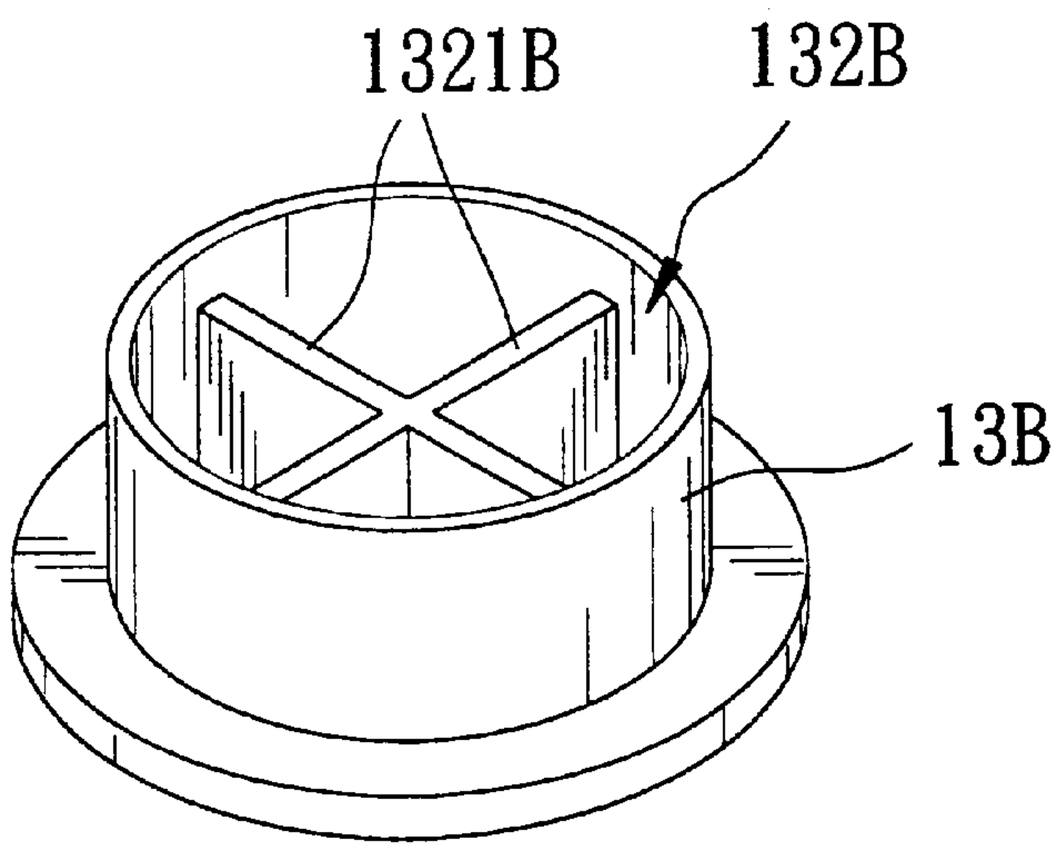


FIG. 7B

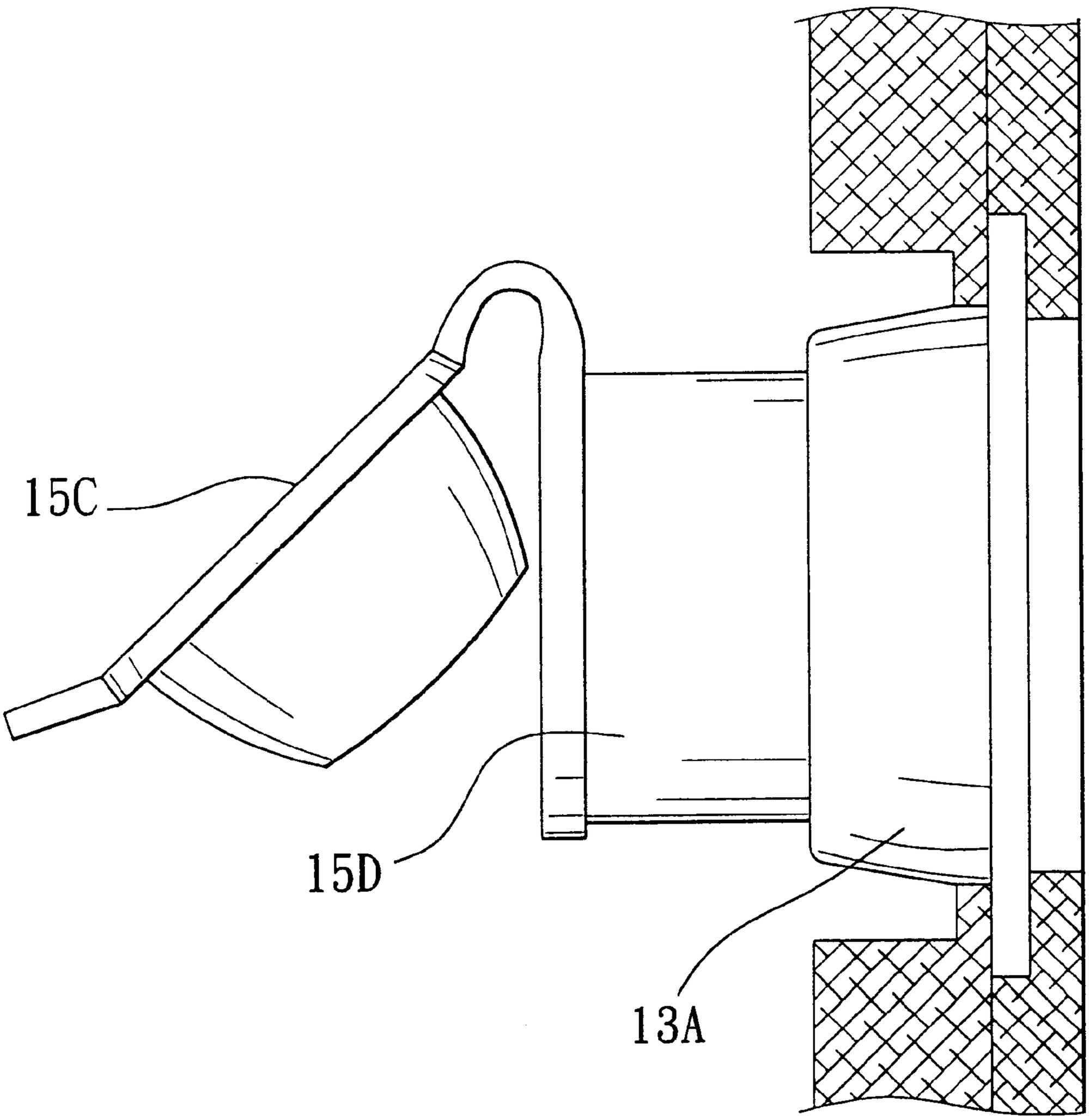


FIG. 8

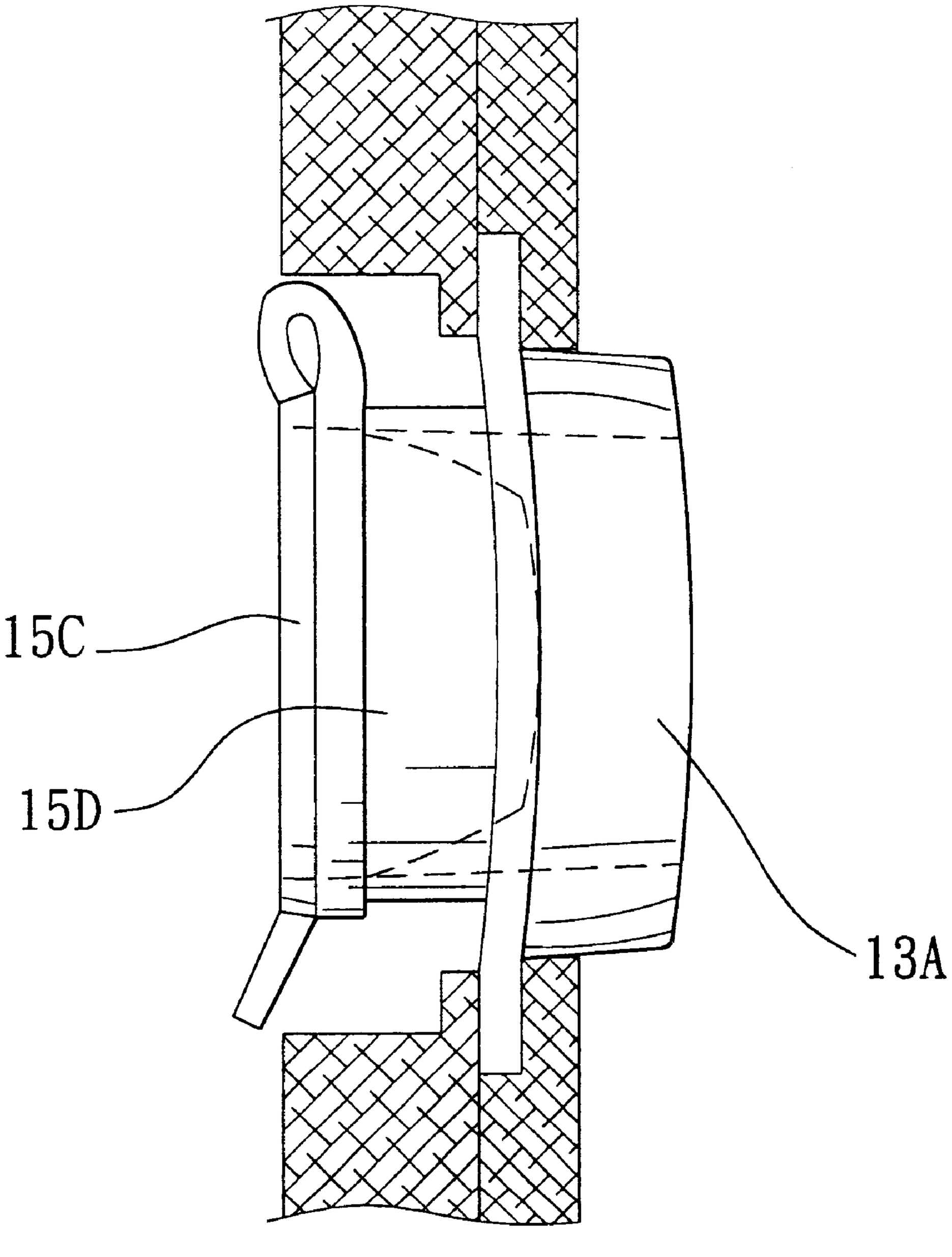


FIG. 9

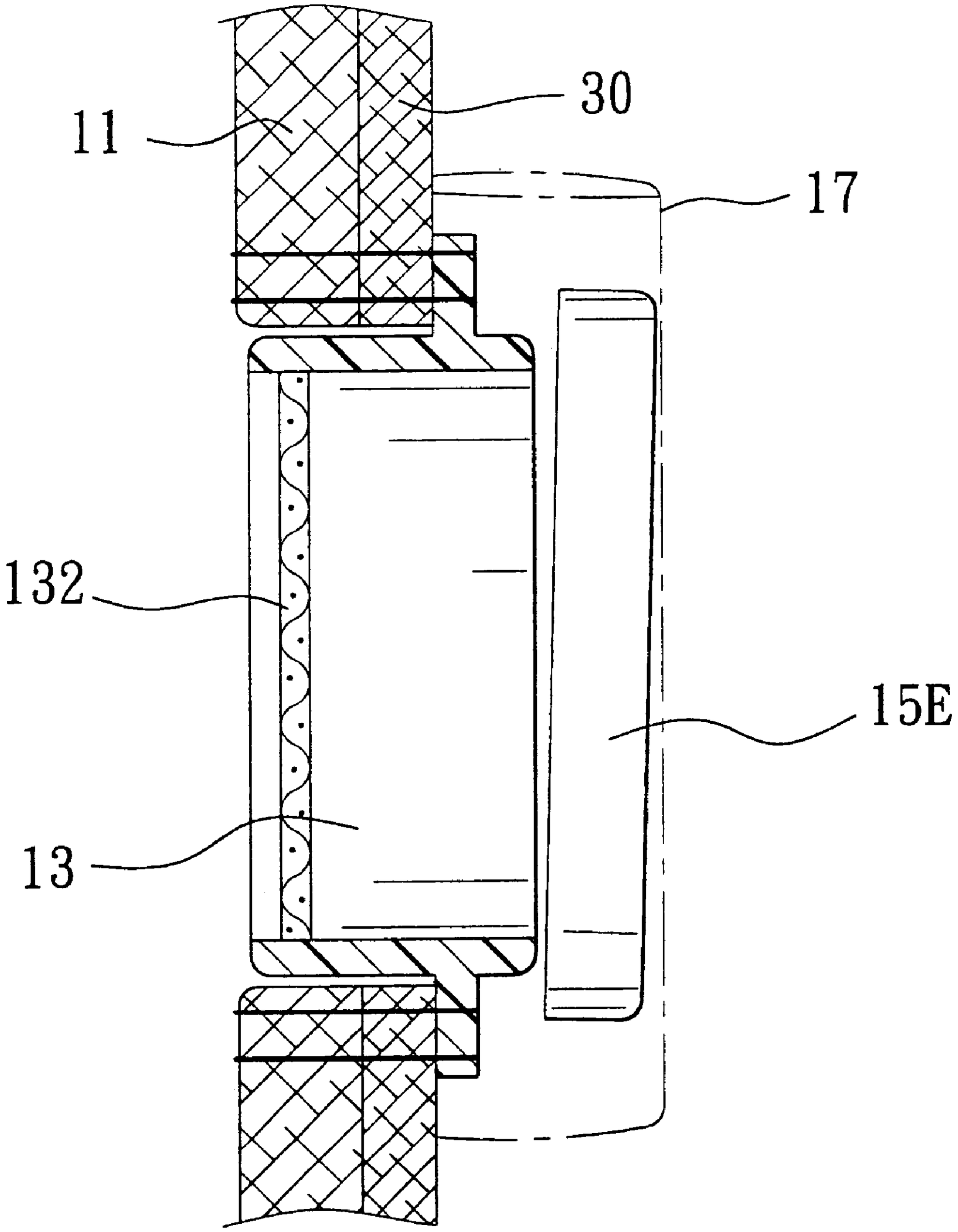


FIG. 10

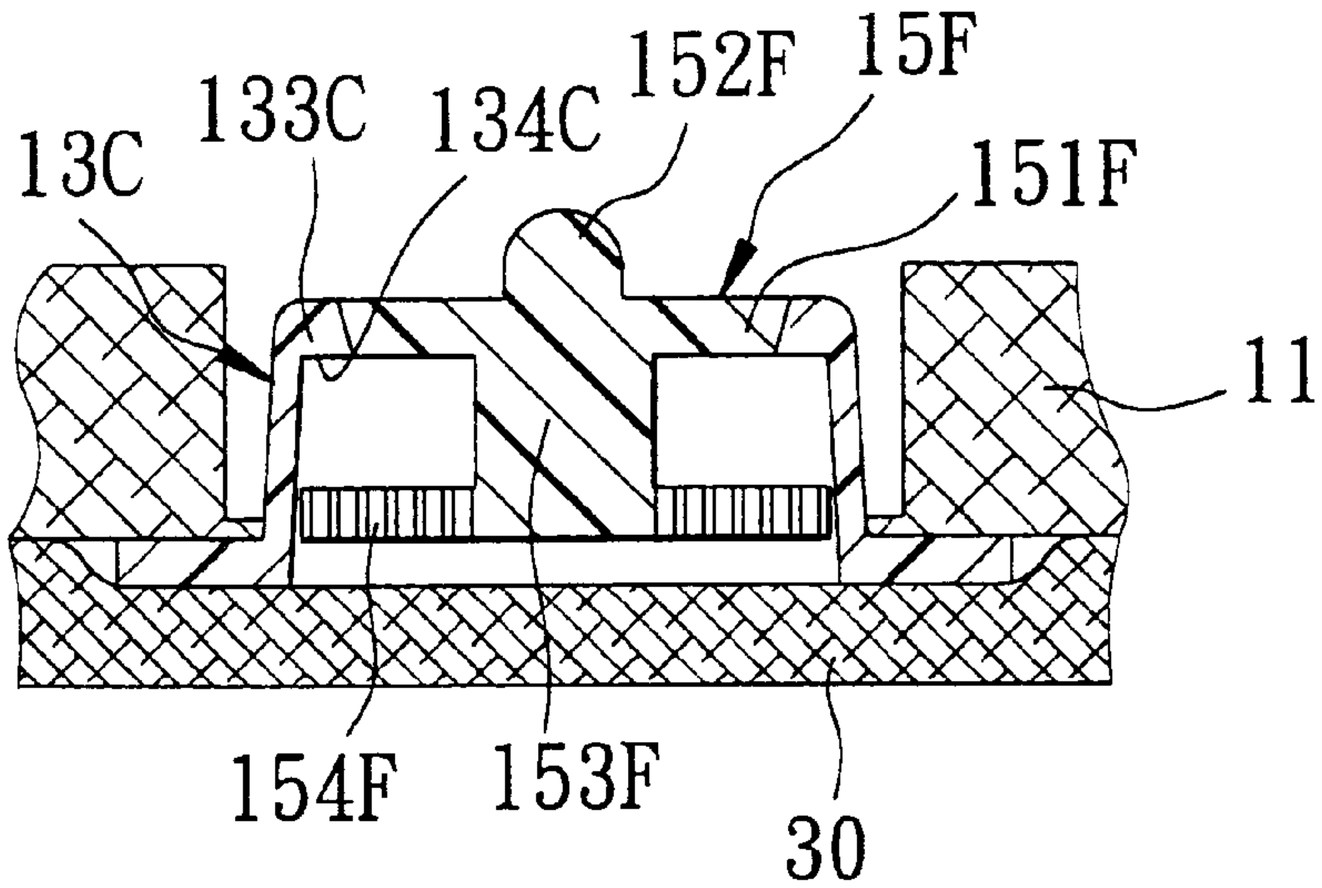


FIG. 11

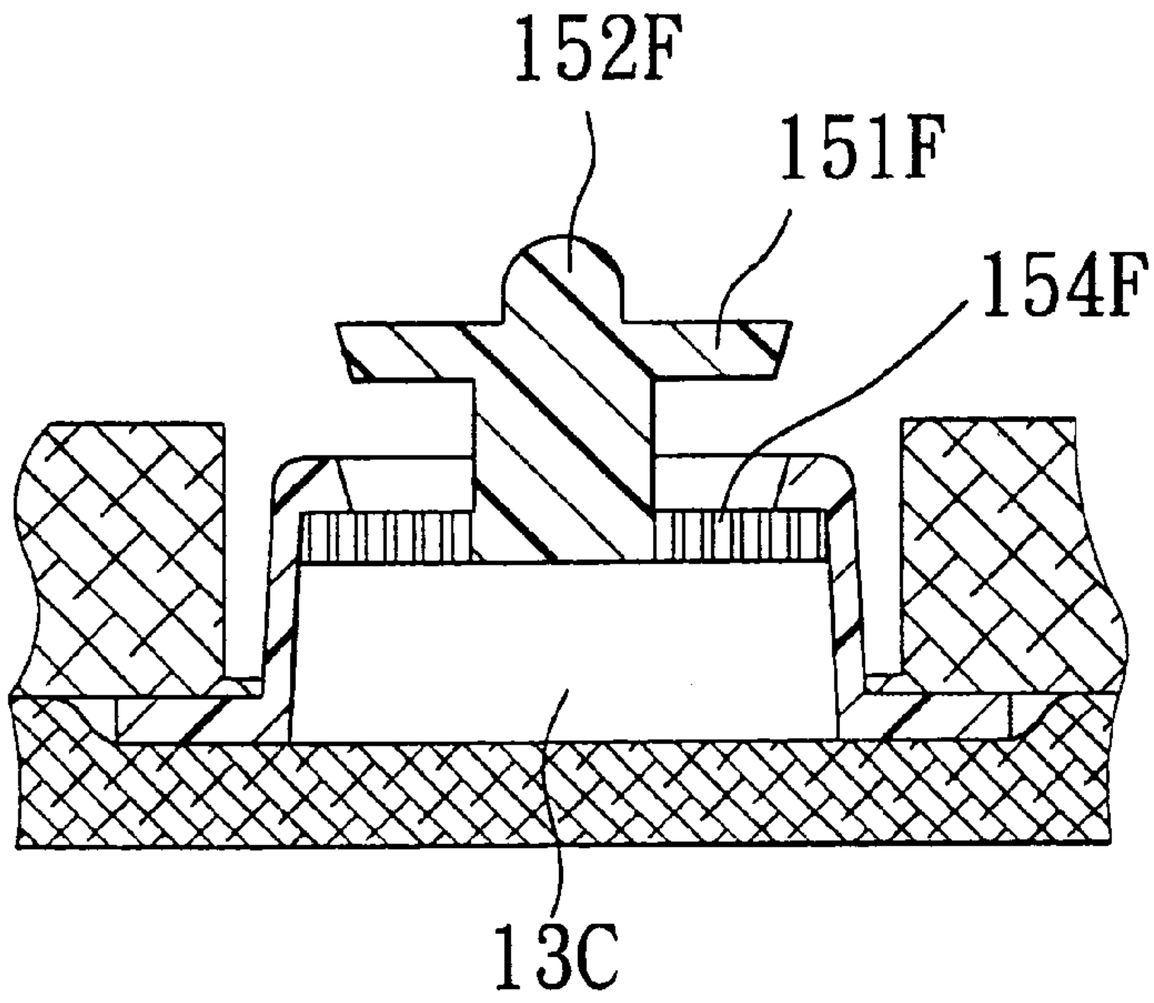


FIG. 12

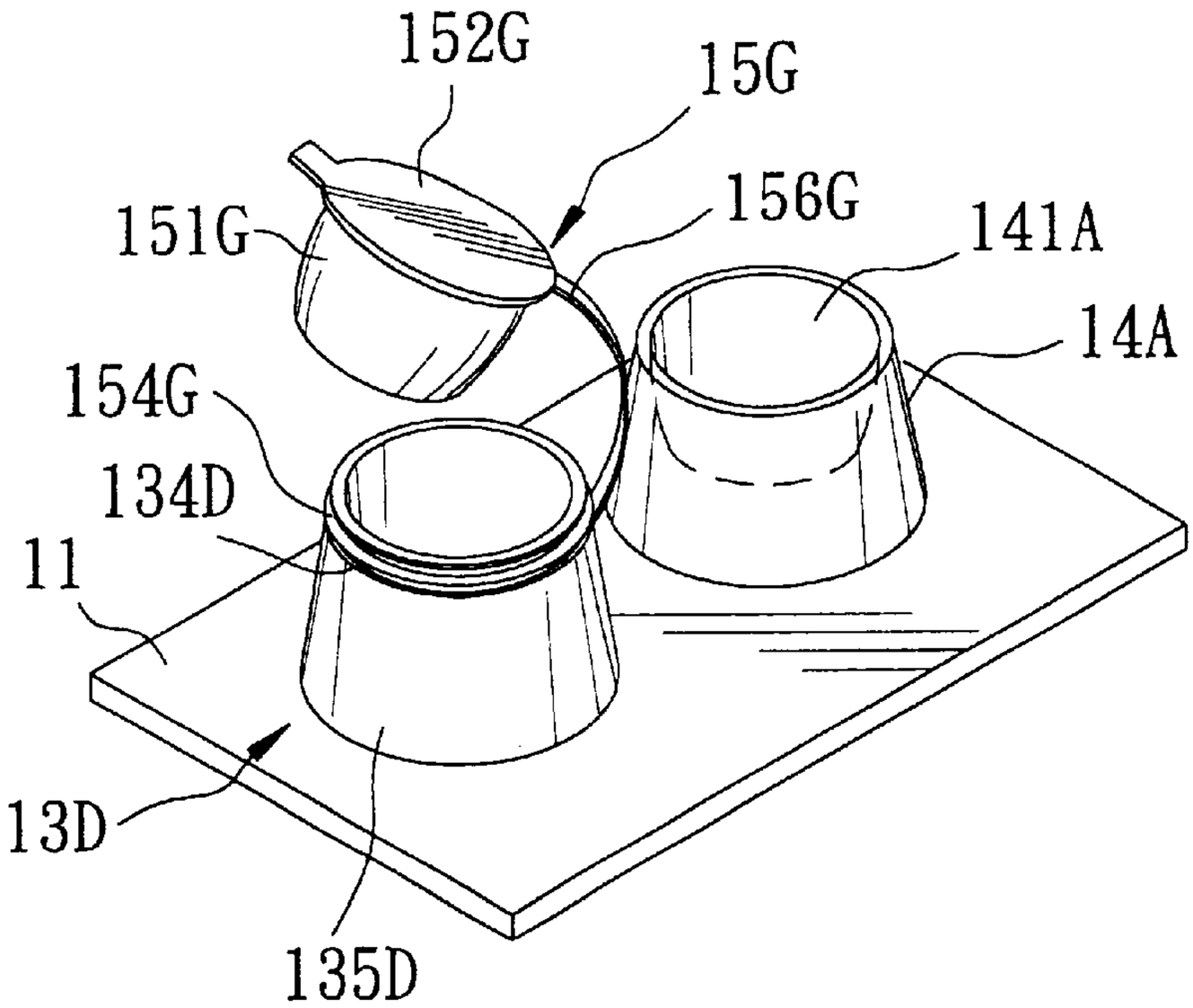


FIG. 13

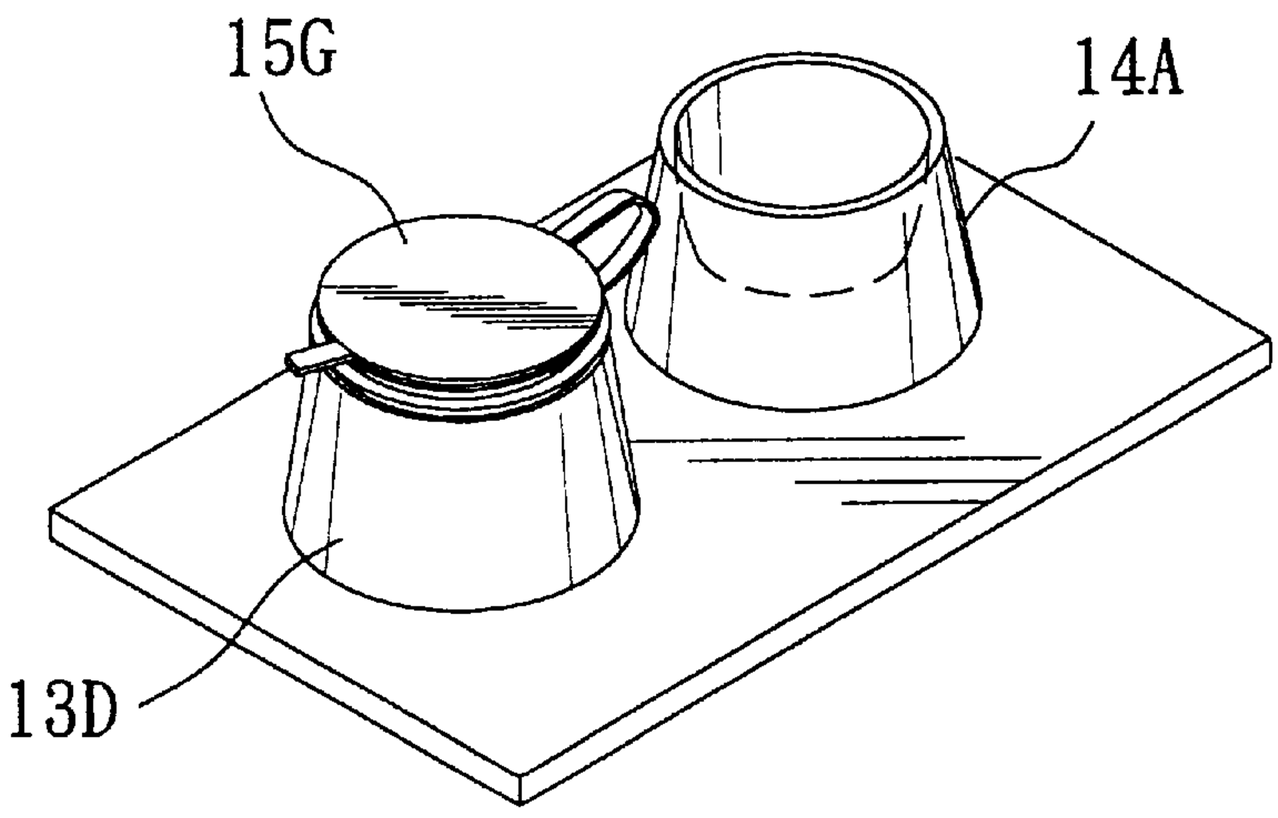


FIG. 14

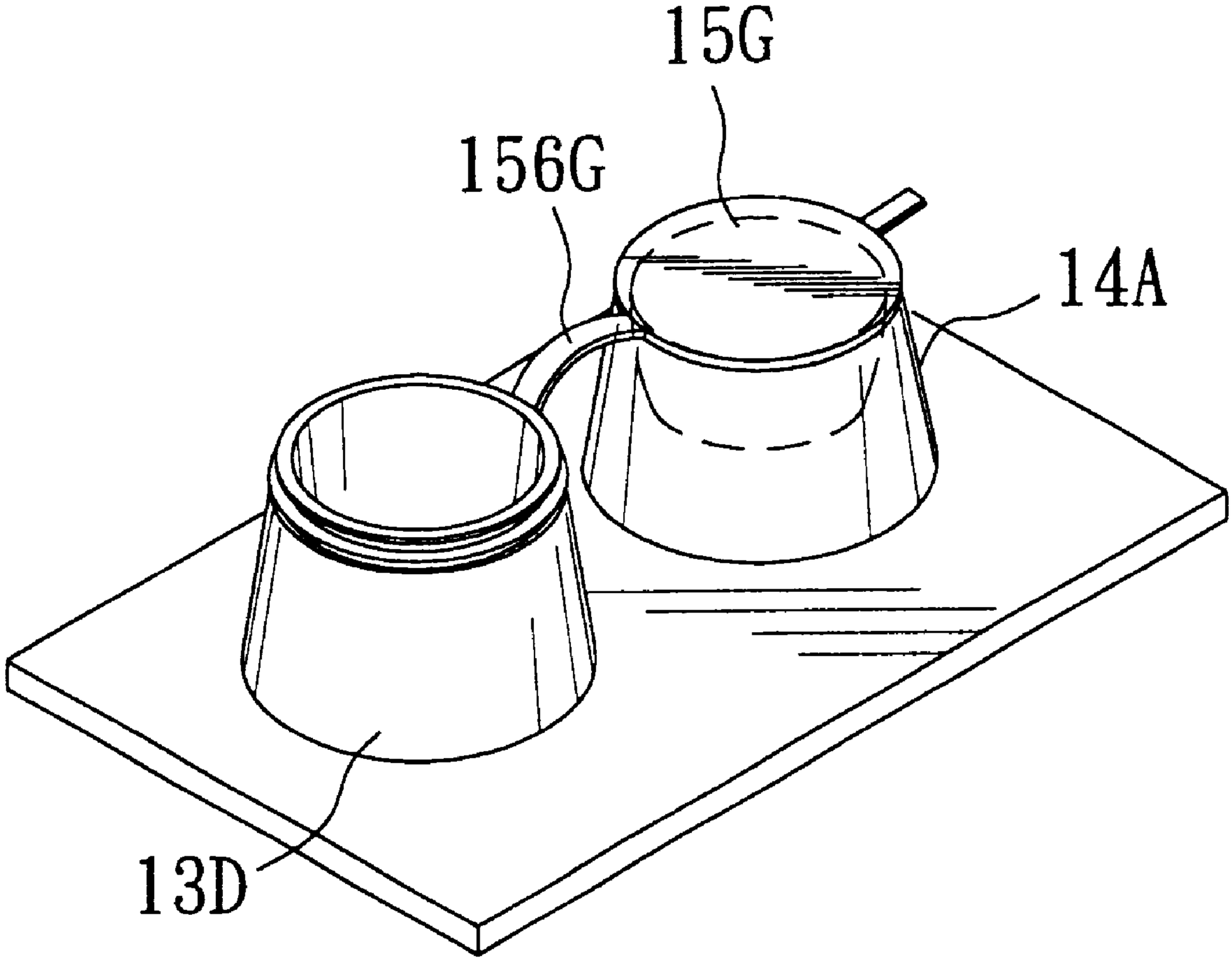


FIG. 15

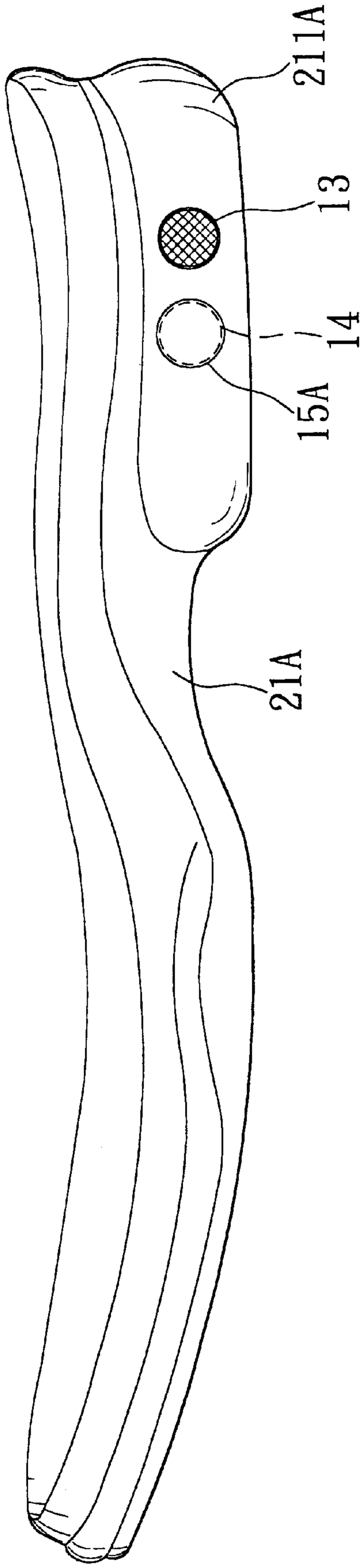


FIG. 16

# SHOE HAVING A LID FOR COVERING A DRAIN HOLE

## BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to a shoe having vent or drain holes, more particularly, to a shoe having lids for covering vent or drain holes.

2. Description of the Related Art

Athletic shoes such as canvas sneakers and fishing shoes are usually provided with through holes below shank parts of an upper. These holes serve to ventilate the shoe, when the shoe is used in a dry area. When the shoe is used for activities such as, sailing and fishing, a large amount of water entering the shoe from the top of the shoe can be drained rapidly out of the shoe through the through-holes. However, since the through holes cannot be closed, water cannot be prevented from flowing into the shoe when the wearer walks in an area where the level of water is low, or cannot prevent sand or mud from entering the shoe when walking in a sandy or muddy area.

## SUMMARY OF THE INVENTION

An object of the present invention is to provide a shoe with a lid which can be attached removably to a ventilating or draining hole for preventing undesirable solid particles from entering the shoe.

Another object of the invention is to provide a shoe with a lid which can be attached removably to a ventilating or draining hole and which also serves to carry a logo or an advertisement.

Accordingly, a shoe according to the present invention comprises: a shoe body including at least one through-hole extending from an inside to an outside of the shoe body; at least one hollow base fixed in said through hole and having an inner end at the inside of the shoe body and an outer end opposite to the inner end, the hollow base being hollow from the inner end to the outer end for passage of a fluid; and a lid attached removably to the hollow base so as to block the hollow base.

## BRIEF DESCRIPTION OF THE DRAWINGS

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiments with reference to the accompanying drawings, of which:

FIG. **1** is a side view of a shoe embodying the present invention;

FIG. **2** is a fragmentary perspective view of the shoe of FIG. **1**;

FIG. **2A** is a plan view of a lid used in the shoe of FIG. **1**;

FIG. **3** is a fragmentary sectional view taken along line **3—3** of FIG. **1**;

FIG. **4** shows an exploded view of a portion within a circle (A) in FIG. **1**;

FIG. **5** is a bottom view of the shoe of FIG. **1**;

FIG. **6** is a sectional view taken along line **6—6** of FIG. **5**;

FIG. **7A** is a perspective view of an alternative hollow base according to the present invention;

FIG. **7B** is a perspective view of another alternative hollow base according to the present invention;



FIG. **8** is a sectional view showing the hollow base of FIG. **7A** and a lid unit used therein;

FIG. **9** is the same view as FIG. **8** but with the lid unit inserted completely into the hollow base;

FIG. **10** is a sectional view showing an inside lid disposed inside a shoe body to close the hollow base;

FIG. **11** is a sectional view illustrating a lid having a lid body having a stem connected to a screen;

FIG. **12** is the same view as FIG. **11** but with the lid body being pulled outward;

FIG. **13** is a perspective view illustrating a lid having a lid body connected to a ring via a strap;

FIG. **14** is the same view as FIG. **13** but with the lid body plugged in a hollow base;

FIG. **15** is the same view as FIG. **13** but with the lid body plugged in a cavity of a stud; and

FIG. **16** shows an outsole provided with a hollow base and a stud according to the present invention.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiments of the present invention will be illustrated with reference to FIGS. **1** to **10** in which like elements are represented by like numerals.

Referring to FIGS. **1**, **2**, **2A** and **3**, a shoe embodying the present invention is shown to include a shoe body **10** which includes an upper **11** and an out sole **21**. The upper **11** is formed with three through-holes **12** each of which extends from an inside to an outside of the shoe body **10**. Two hollow bases **13** are fitted respectively in two of the through holes **12**. Each hollow base **13** has a tubular wall **130** which is hollow from an inner end to an outer end thereof. The tubular wall **130** is formed with a flange **131** which abuts an inner surface of the upper **11** and which is fixed to the upper **11** via a sewing process, an end rim **133**, and an integral screen member **132** extending across the hollow base **13**. Instead of sewing, adhesive bonding may be used to fix the flange **131** to the upper **11**. Numeral **30** represents a lining disposed inside the shoe body **10**. A non-hollow or solid stud **14** is fitted in the remaining through-hole **12** and includes a lateral rim **143** and an inner flange (not shown) similar to the flange **131** of the hollow base **13**. The two hollow bases **13** and the stud **14** are arranged at three locations which define substantially three vertices of an equilateral triangle.

Since the hollow bases **13** are hollow, they serve to provide passages **135** (only one is shown in FIG. **3**) for air ventilation or water drainage. The screen members **132** of the hollow bases **13** function to prevent solid particles from entering the shoe body **10**. A lid **15** is provided to block or close the passages **135** of the hollow bases **13**. The lid **15** is elongated and includes two closure parts **151** which are circular and which are interconnected via a connection part **152**. Each closure part **151** is formed with a looped or annular groove **153** which is defined by an outer flange **154** and an inner circular raised part **155**. The lid **15** can be press fitted simultaneously to both of the hollow bases **13**, or to one of the hollow bases **13** and the stud **14**. The annular groove **153** of each closure part **151** is to receive fittingly the lateral rim **143** of the stud **14**, or the end rim **133** of one of the hollow bases **13**.

The length of the lid **15** is arranged such that the lid **15** can be attached in a bridging manner to any two of the hollow bases **13** and the stud **14**. In particular, the closure parts **151** of the lid **15** can be press-fitted respectively and removably to the end rims **133** of the two hollow bases **13**, as shown by

phantom lines in FIG. **1**. In this situation, the two hollow bases **13** are blocked and closed by the lid **15**. Alternatively, the closure parts **151** of the lid **15** may be attached removably and respectively to the end rim **133** of one of the hollow bases **13** and the lateral rim **143** of the stud **14**, as shown in solid lines of FIG. **1**. In this situation, the other hollow base **13** is in an open state and permits ventilation or water drainage. In order to drain water effectively, the lid **15** may also be removed from both of the hollow bases **13** and attached to the stud **14** with only one closure part **151** thereof. When it is desired to prevent water or solid particles from entering the shoe body **10**, both hollow bases **13** may be closed by attaching the lid **15** to the hollow bases **13**.

Referring to FIG. **4** in combination with FIG. **1**, the upper **11** further includes one non-hollow or solid stud **14** and one hollow base **13** mounted on a tongue **111**. When the hollow base **13** is to be placed in an open state, the stud **14** serves to retain a lid **15**A which has a construction similar to one of the closure part **151** of the lid **15**. Specifically, the lid **15**A is circular and has an annular groove **152**A defined by an annular flange **154**A and a raised part **155**A. The lid **15**A can be press-fitted removably to the stud **14**. When it is desired to close the hollow base **13**, the lid **15**A may be detached from the stud **14** and attached to the hollow base **13**.

Referring to FIGS. **5** and **6** in combination with FIG. **1**, the outsole **21** is provided with a stud **14**, a hollow base **13**, and a lid **15**A for attachment to the stud **14** or the hollow base **13**. The hollow base **13** has a flange **131** abutting an inner surface of the outsole **21**. The hollow base **13** may be assembled with the outsole **21** by bonding the hollow base **13** to the outsole **21** with an adhesive, or by placing the hollow base **13** in a mold during molding of the outsole **21**.

FIGS. **7**A and **7**B show respectively two alternative hollow bases **13**A and **13**B usable in the present invention. The hollow base **13**A differs from the hollow base **13** in that it does not include any screen member extending across the hollow base **13**A. The hollow base **13**B differs from the hollow base **13** in that it has an integral screen member **132**B which is defined by two intersecting ribs **1321**B.

Referring to FIGS. **8** and **9**, the hollow base **13**A may be closed by a lid which includes a lid body **15**C and a lid holder **15**D. The lid holder **15**D is hollow and can be press-fitted in the hollow base **13**A. The lid body **15**C is hinged to the lid holder **15**D. When the lid body **15**C is plugged in the lid holder **15**D, the lid holder **15**D is closed. When the lid body **15**C and the lid holder **15**D are removed from the hollow base **13**A, the hollow base **13**A is opened.

Referring to FIG. **10**, a hollow base **13** is inserted into and fixed to an upper **11** and a lining **30**. A lid **15**E is press-fitted to the hollow base **13** from the inside of a shoe body (not shown) for closing the hollow base **13**. A pocket **17** is attached to the lining **30** to cover the lid **15**E or to prevent the wearer's foot from contacting directly the lid **15**E. The hollow base **13** is opened when the lid **15**E is removed from the hollow base **13**.

Referring to FIGS. **11** and **12**, the upper **11** may be provided with a hollow base **13**C which is covered by a lid **15**F. The hollow base **13**C has a narrow open end part **133**C at an outer open end thereof and an annular shoulder **134**C formed inwardly of the narrow open end part **133**C. The lid **15**F includes a lid body **151**F having an integral knob **152**F projecting from one side of the lid body **151**F, a stem **153**F projecting from an opposite side of the lid body **151**F, and a screen **154**F held by a bottom end of the stem **153**F. The lid body **151**F can be plugged in the narrow open end part **133**C to block the hollow base **13**C. When the lid body **151** is pulled out via the knob **152**F from the narrow open end part **133**C, the screen **154**F abuts against the shoulder **134**C. In this situation, the hollow base **13**C is opened to permit passage of water or air through the screen **154**F.

Referring to FIGS. **13**, **14** and **15**, the upper **11** is provided with a hollow base **13**D and a stud **14**A. The hollow base **13**D has an annular recess **134**D extending in an outer face of an annular wall **135**D. The stud **14**A has a blind hole **141**A. A lid **15**G has a lid body **151**G plugged in the hollow base **13**D. The lid **15**G further includes a cap plate **152**G formed integrally with the lid body **151**G, an attachment ring **154**G received movably in the annular recess **134**D and connected to the cap plate **152**G via a strap **156**G. When the lid body **151**G is plugged in the hollow base **13**D, the hollow base **13**D is closed. When the lid body **151**G is removed from the hollow base **13**D and fitted in the blind hole **141**A of the stud **14**A, the hollow base **13**D is opened.

Referring to FIG. **16**, like the outsole **21** shown in FIG. **5**, a heel section **211**A of a midsole **21**A may be provided with a lid **15**A, a stud **14** and a hollow base **13**.

As described hereinbefore, the lids **15**, **15**A, **15**C, **15**E, **15**F, **15**G according to the present invention can block fluid passages provided by the hollow bases **13**, **13**A, **13**B, **13**C. In addition, these lids **15**, **15**A, **15**C, **15**E, **15**F, **15**G can also serve to hold advertising logos or teams' logos. The logos may be changed when desired since the lids are removable. These lids may be made of a transparent material or a luminescent material for decorative purposes. When the lids are provided at the bottom of an outsole, they may be fabricated from a high abrasion-resistant material. When the lids are made of rubber having a high coefficient of friction, the lids may be used as traction members for an outsole.

While the present invention has been described in connection with what is considered the most practical and preferred embodiments, it is understood that this invention is not limited to the disclosed embodiments but is intended to cover various arrangements included within the spirit and scope of the broadest interpretation so as to encompass all such modifications and equivalent arrangements.

I claim:

**1**. A shoe comprising:

a shoe body including at least one through-hole extending from an inside to an outside of said shoe body;

at least one hollow base fixed in said through-hole and having an inner end at the inside of said shoe body and an outer end opposite to said inner end, said hollow base being hollow from said inner end to said outer end for passage of a fluid;

a lid attached removably to said hollow base so as to block said hollow base; and

wherein said lid includes a hollow lid holder press-fitted removably in said hollow base, and a lid body hinged to said lid holder and pluggable in said lid holder.

**2**. A shoe comprising:

a shoe body including at least one through-hole extending from an inside to an outside of said shoe body;

at least one hollow base fixed in said through-hole and having an inner end at the inside of said shoe body and an outer end opposite to said inner end, said hollow base being hollow from said inner end to said outer end for passage of fluid and including a tubular wall having an end rim;

a lid attached removably to said hollow base so as to block said hollow base; and

wherein said lid includes a lid body pluggable in said hollow base, an attachment ring mounted on said

hollow base, and a strap interconnecting said lid body and said attachment ring.

**3**. The shoe as claimed in claim **2**, further comprising a stud mounted on said shoe body adjacent to said hollow base, said stud having a blind hole to receive removably said lid body, said lid body being received selectively in one of said blind hole and said hollow base.

**4**. A shoe comprising:

a shoe body including at least two through-holes extending from an inside to an outside of said shoe body;

a pair of hollow bases respectively fixed within said through-holes and each having an inner end at the inside of said shoe body and an outer end opposite to said inner end, each of said hollow bases being hollow form said inner end to said outer end for passage of a fluid, each of said hollow bases having an end rim;

a solid stud mounted on said shoe body adjacent to said hollow bases and having a lateral rim, said stud and said hollow bases being respectively arranged at three locations which define substantially three vertices of an equilateral triangle; and

a single-piece lid for covering removably said hollow bases, said lid being long enough to bridge either said two hollow bases or one of said hollow bases and said solid stud, said lid including two closure parts and a connection part interconnecting said closure parts, each of said closure parts being engageable with either said end rim of one of said hollow bases or said lateral rim of said hollow stud.

**5**. The shoe as claimed in claim **4**, wherein each of said closure parts has a looped groove to engage releasably either of said end rim of one of said hollow bases or said lateral rim of said stud.

* * * * *